

IN THE CLAIMS:

1. (Previously Presented) A magnetic recording medium which comprises a substrate, an orientation control layer formed thereon, a Co alloy magnetic layer formed above the orientation control layer, and a Cr underlayer or Cr alloy underlayer formed between the orientation control layer and the Co alloy magnetic layer, said orientation control layer containing at least Ti in an amount not less than 35 at.% and not more than 65 at.% and Al in an amount not less than 35 at.% and not more than 65 at.%.

2. (Previously Presented) A magnetic recording medium as defined in Claim 1, wherein the orientation control layer substantially has an L10 (AuCu I-type) crystal structure.

3. (Canceled)

4. (Original) A magnetic recording medium as defined in Claim 1, wherein the underlayer is that of double-layer structure which consists of a first underlayer made of Cr and a second underlayer which is formed on the first underlayer containing at least one species of element selected from Cr, Nb, Mo, Ta, W, and Ti.

5. (Original) A magnetic recording medium as defined in Claim 1, which has an intermediate layer between the magnetic layer and the underlayer, said intermediate layer being made of a material containing Co and not less than 25 at.% Cr.

6. (Original) A magnetic recording medium which comprises a substrate, an orientation control layer formed thereon, and a Co alloy magnetic layer formed thereon with a Cr underlayer or Cr alloy underlayer interposed between them, said orientation control layer containing at least one element selected from group A (consisting of Ni and Co) in an amount of from 30 at.% to 60 at.%, Al in an amount from 20 at.% to 30 at.%,

and one element selected from group B (consisting of Ti and Zr) in an amount from 20 at.% to 30 at.%.

7. (Previously Presented) A magnetic recording medium as defined in Claim 6, wherein the orientation control layer substantially has an L21 (Cu₂AlMn type) crystal structure.

8. (Canceled)

9. (Original) A magnetic recording medium as defined in Claim 6, wherein the underlayer is that of double-layer structure which consists of a first underlayer made of Cr and a second under-layer which is formed on the first underlayer containing at least one species of element selected from Cr, Nb, Mo, Ta, W, and Ti.

10. (Original) A magnetic recording medium as defined in Claim 6, which has an intermediate layer between the magnetic layer and the underlayer, said intermediate layer being made of a material containing Co and not less than 25 at.% Cr.

11-18. (Canceled)

19. (Currently Amended) A magnetic recording medium which comprises a substrate, an orientation control layer formed thereon, and a Co alloy magnetic layer formed thereon with ~~a Cr underlayer or Cr alloy~~ an underlayer interposed between them, said orientation control layer having the B2 (CsCl) crystal structure incorporated with at least B,

wherein the underlayer is that of double-layer structure which consists of a first underlayer made of Cr and a second underlayer which is formed on the first underlayer containing at least one species of element selected from Cr, Nb, Mo, Ta, W, and Ti.

20. (Previously Presented) A magnetic recording medium which comprises a substrate, an orientation control layer formed thereon, and a Co alloy

magnetic layer formed thereon with a Cr underlayer or Cr alloy underlayer interposed between them, said orientation control layer having the B2 (CsCl) crystal structure incorporated with at least B, and an intermediate layer between the magnetic layer and the underlayer, said intermediate layer being made of a material containing Co and not less than 25 at.% Cr.

21. (Previously Presented) A magnetic storage device having a magnetic recording medium, a driver to turn said magnetic recording medium in the recording direction, a magnetic head including a recording element and a read-back element, means to move said magnetic head relative to said magnetic recording medium, and a record-read signal processing means to perform waveform processing on input signals to and output signals from said magnetic head, wherein said magnetic recording medium is the magnetic recording medium defined in Claim 1 and the read-back element of said magnetic head is a magnetoresistive effect element.